AMENDMENTS TO THE CLAIMS (THIS LISTING REPLACES ALL PRIOR LISTINGS):

1. (Currently Amended) A quality-of-service guaranteed media access control method with dynamic granularity control for local wireless ATM networks, ~~the~~ an ATM network transmitting information via a sequence of frames, each frame having reservation bandwidth and contention bandwidth in units of slots for supporting constant bit rate, variable bit rate, available bit rate, and reservation request (RVR) traffic, the method comprising:

(A) using a neural fuzzy traffic prediction network to predict~~s~~ $\hat{g}_n$ at a time representing an end of the ~~RB~~ reservation bandwidth of frame n, where $\hat{g}_n$ is the predicted value of g_n, and g_n denotes a normalized offered load of the reservation request traffic that is activated within the interval from the contention bandwidth of frame n-1 to the reservation bandwidth of frame n, wherein n is an integer;

(B) based on $\hat{g}_n$, deriving a favorable bandwidth ~~of~~ for frame n and the contention bandwidth of frame n, wherein the favorable bandwidth is defined as a bandwidth ~~capable of being~~ allocated ~~by~~ from remaining unreserved bandwidth of a maximum-sized frame satisfying the most stringent quality of service requirement; the remaining unreserved bandwidth is obtained by subtracting allocated reservation bandwidth from the entire bandwidth of the maximum-sized frame ~~subtracted by allocated reservation bandwidth~~; a size of the favorable bandwidth ~~of~~ for frame n is defined as the number of slots allocated in a period of the contention bandwidth of frame n, such that the contention bandwidth has a maximum steady-state throughput; and

(C) at the end of contention bandwidth ~~of~~ for frame n, constructing learning data in accordance with ~~actual~~ used bandwidth ~~allocation~~ for ~~being~~ input to the neural fuzzy traffic prediction network to perform a learning operation.

2. (Original) The method as claimed in claim 1, wherein in step (A), the neural fuzzy traffic prediction networks predicts $\hat{g}_n$ based on a set of m input values taken from m most-recent g_k values (k=n-1 to n-m).

3. (Original) The method as claimed in claim 2, wherein in step (B), the contention bandwidth is chosen as the smaller value between the remaining unreserved bandwidth ans favorable bandwidth.

4. (Currently Amended) The method as claimed in claim 3, wherein in step (C), at the end of the contention bandwidth of frame n, actual achieved channel throughput is computer, and then, the offered load can be approximated by inversing a steady-state throughtput function corresponding to the contention bandwidth allocated in frame n.

5. (Currently Amended) The method as claimed in claim 4, wherein the reservation bandwidth is provided ~~for supporting~~ for supporting the constant bit rate, variable bit rate, and available bit rate traffic, and the contention bandwidth is provided for supporting the reservation request traffic.

6. (Original) The method as claimed in claim 4, wherein each slot of the frame included the ATM cell, and controls fields of guard times and sync.